

**REMARKS**

Claims 7-13 have been canceled without prejudice or disclaimer and claims 15-17 have been amended to improve form. Claims 1-6 and 14-18 are now pending in this application.

Claims 1-6 and 14-18 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of McLain et al. (U.S. Patent No. 6,295,518; hereinafter McLain '518) or claims 1-18 of McLain, Jr. et al. (U.S. Patent No. 6,256,659; hereinafter McLain '659). The rejections are respectfully traversed.

The Office Action admits that the present claims are not identical to claims 1-23 of McLain '518 and claims 1-18 of McLain '659, but states that the present claims are not patentably distinct over the claims of McLain '518 or McLain '659 (Office Action – page 3). The Office Action also states that the first and second command control vectors of the present application are met by the two or more command control vectors of McLain '518, the single copy of the method object is met by the command response table of McLain '518, the first and second data objects are met by the data objects of McLain '518 and the n/m logical units of instructions are met by the n/m logical units of work of McLain '518 (Office Action – page 3). The Office Action, however, has not met the requirements of establishing a prima facie case of obviousness-type double patenting based on McLain '518.

For example, a proper rejection under obviousness-type double patenting requires that the Examiner identify the differences between the claim(s) in the application and the claims in the patent. The Examiner must then provide reasons why one of ordinary skill

in the art would conclude that the invention defined in the claim(s) in issue is an obvious variation of the invention defined in a claim in the patent (See MPEP § 804). The Examiner has failed to meet these requirements. That is, the Office Action merely states that McLain '518 discloses two or more command control vectors, a command response table, data objects and n/m logical units of work (Office Action – page 4). Claim 1 of the present application, for example, recites specific features, such as identifying the method object in the first command control vector, identifying, in the first command control vector, a first current instruction of the method object, wherein the first current instruction is used to process the first input message. Claim 1 also recites generating a second command control vector, where the generating a second command control vector includes identifying the same method object in the second command control vector and identifying, in the second command control vector, a second current instruction of the method object, wherein the second current instruction is used to process the second input message. The Office Action has failed to address these features with respect to the claims of McLain '518 and has failed to allege that such features would have been obvious based on the claims of McLain '518. Therefore, a prima facie case of obviousness-type double patenting has not been established based on McLain '518.

As to the obviousness-type double patenting rejection based on McLain '659, the Office Action states that the single copy of the method object is met by the virtual object of McLain '659, the first/second data objects are met by the first/second data elements of McLain '659 and the n/m logic units of instructions are met by the n/m logical units of instructions of McLain '659. Similar to the discussion above with respect to McLain '518, the Office Action has not particularly addressed all the claimed features or alleged

that the features not included in the claims of McLain '659 would have been obvious to one of ordinary skill in the art.

Therefore, a prima facie case of obviousness-type double patenting has not been established. Accordingly, withdrawal of the obviousness-type double patenting rejections based on McLain '518 and McLain '659 is respectfully requested.

Claim 16 has been rejected under 35 U.S.C. § 112, second paragraph as being indefinite. In particular, the Office Action states that claim 16 recites three method step limitations in a means plus function type of claim (Office Action – page 3). Claim 16 has hereby been amended to recite these features in means plus function format.

Accordingly, withdrawal of the rejection of claim 16 is respectfully requested.

Claims 1-3 and 14-17 have been rejected under 35 U.S.C. § 103 (a) as being unpatentable over Burgess (U.S. Patent 5,652,888) in view of “Design Patterns, Elements of Reusable Object-Oriented Software,” pages 127-134 by Erich Gamma et al. (hereinafter Gamma). The rejection is respectfully traversed.

Claim 1 recites generating a first command control vector for a first input message, the first command control vector identifying a method object that contains one or more instructions for processing the first input message. Claim 1 also recites that the generating a first command control vector comprises identifying the method object in the first command control vector and identifying, in the first command control vector, a first current instruction of the method object, wherein the first current instruction is used to process the first input message.

The Office Action states that Burgess discloses these features and points to col. 2, lines 33-35, col. 4, lines 19-54 and col. 7, lines 3-54 for support (Office Action – page 5).

The Office Action also states that the identified target object in Burgess is equivalent to identifying the method object, as recited in claim 1, and the identified member function of the identified target object in Burgess is equivalent to identifying a first current instruction of the method object, as also recited in claim 1 (Office Action – page 8). The applicants respectfully disagree.

First, Burgess at col. 2, lines 27-35 discloses that an event object includes message information and a dispatching member function for invoking a member function of a target object passing the message information. This portion of Burgess further discloses that a message is passed by invoking the dispatching member function passing an identifier to a target object and an identifier of a member function of the target object. The dispatching member function invokes the identified member function of the identified target object passing the event information as an actual parameter. This portion of Burgess does not disclose identifying, in a first command control vector, a first current instruction of the method object. Rather, this portion of Burgess merely discloses that a message may be passed between components by invoking a dispatching member function and a member function of a target object. Nowhere in this portion of Burgess, does Burgess disclose identifying, in a first command control vector, a first current instruction of a method object as recited in claim 1.

Burgess at col. 4, lines 19-54 discloses that message information is encapsulated in an object of an event class. Each class of an event object contains information that is passed to a target member function according to the function prototype (Burgess – col. 4, lines 33-35). This portion of Burgess does not disclose identifying a first current

instruction of method object that is identified in a command control vector, as recited in claim 1.

Burgess at col. 7, lines 3-54 refers to Fig. 7, which illustrates the flow of control of sending a message from a source object to a target object. In step 721, the member function determines which entries in the connection array correspond to the source member function. When an entry is found, “the member function InformTargets invokes the member function NotifyEvent of the target object passing a pointer to the event, a pointer to the source object, and a pointer to the target member function” (col. 7, lines 12-18). Passing pointers in this manner to the target member function is not equivalent to identifying a first current instruction of method object that is identified in a command control vector, as recited in claim 1.

In response to some of these arguments made in the previous response, the present Office Action states that the applicant has not provided “specific underlying analysis as to why the portion(s) of the prior art relied on in the rejection do not support the examiner’s position, this is disagreement without reason” (Office Action – page 8). The applicants strongly disagree with the Examiner’s characterization of the previous arguments.

In the previous response filed January 23, 2003 and once again in the discussion above, the applicants have pointed to the specific portions of Burgess relied upon as allegedly disclosing the claimed features and clearly pointed out that these portions of Burgess do not support the Examiner’s allegations. The applicants have clearly rebutted the allegations as to what the prior art allegedly discloses by pointing to the specific portions of Burgess relied upon in the Office Action. For example, as discussed above,

none of the portions of Burgess referenced in the Office Action disclose identifying, in a first command control vector, a first current instruction of the method object, as recited in claim 1. The allegation that the previous response provided “disagreement without reason” lacks merit.

Claim 1 also recites that the generating a second command control vector includes identifying the same method object in the second command control vector and identifying, in the second command control vector, a second current instruction of the method object, wherein the second current instruction is used to process the second input message. As to these features, the Office Action states that Burgess discloses these features and points generally to col. 8, line 46 to col. 11, line 12 for support (Office Action – page 5). The applicants respectfully disagree with this analysis of Burgess.

Burgess at col. 8, line 46 to col. 11, line 12 refers to Code Table 3 that contains pseudocode for a sample scrollbar object. It is not clear how this portion of Burgess is relevant to the features recited in claim 1. That is, this portion of Burgess does not disclose generating a second command control vector that identifies the same method object identified by the first command control vector and identifies a second current instruction of the method object, wherein the second current instruction is used to process the second input message. The applicants respectfully request that any subsequent Office Action particularly point out where this feature is disclosed in Burgess or withdraw the rejection.

In response to some of these arguments made in the previous response, the Office Action indicates that connection manager CObject in Burgess is equivalent to the claimed same method object and the method object contains one or more instructions for

processing a second input message and the method object contains one or more instructions for processing the second input message (Office Action – page 9). Claim 1, however, recites that a second current instruction of the method object is identified in a second command control vector, where the second current instruction is used to process the second input message. Even if, for the sake of argument, Burgess disclosed generating a second command control vector, Burgess does not disclose or suggest identifying a second current instruction of the method object, wherein the second current instruction is used to process the second input message.

Gamma was used in the rejection of claim 1 for support for allegedly disclosing providing a single copy of a class object (Office Action – page 6). While not concurring with the alleged teachings of Gamma, Gamma does not make up for the deficiencies in Burgess with respect to claim 1 discussed above.

Therefore, even if Burgess and Gamma were properly combined, the claimed invention would not result. For at least these reasons, withdrawal of the rejection and allowance of claim 1 are respectfully requested.

In addition, even if, for the sake of argument, the combination of Burgess and Gamma was construed to disclose each of the features of claim 1, the Office Action does not provide the motivation required under 35 U.S.C. § 103 as to why it would have been obvious to combine these references.

The Office Action states that Burgess “desires to hide different implementations/functional prototypes of the target object from the source object such that each source member function invokes target member functions with the same prototype” and points to col. 4, lines 31-37 for support (Office Action – page 6). The

Office Action then states that Burgess does not provide a mechanism for calling with the same prototype, but that Gamma discloses a mechanism for calling a target object with the same prototype. The Office Action further states that one of ordinary skill in the art would have been motivated to “use the mechanism of Gamma to achieve the hiding in Burgess” (Office Action – page 6). The applicants respectfully disagree.

First, Burgess at col. 4, lines 31-37 discloses that different implementations of event objects are used to represent different function prototypes of target member functions. Each class of event object contains information that is passed to a target member function according to the function prototype and therefore, each source member function invokes target member functions with the same prototype. Therefore, the allegation that Burgess “desires to hide different implementations/functional prototypes of the target object from the source object” is not supported by Burgess at col. 4, lines 31-37.

In addition, even if Burgess did disclose some desire to hide different implementations/functional prototypes, as alleged, the Office Action has still not provided any objective motivation as to why it would have been obvious to combine Gamma with Burgess. The Office Action merely indicates that Gamma provides a mechanism for calling a target object with the same prototype and therefore alleges that one of ordinary skill in the art would have been motivated to use the mechanism of Gamma to achieve the hiding in Burgess. This is merely a conclusory statement regarding an alleged benefit of the combination. The mere fact that one reference allegedly provides some missing disclosure with respect to a claim does not satisfy the



requirements of 35 U.S.C. § 103 as to why it would have been obvious to combine these references.

For at least the reasons discussed above, withdrawal of the rejection and allowance of claim 1 are respectfully requested.

Claims 2 and 3 depend from claim 1 and are believed to be allowable for at least the reasons claim 1 is allowable. In addition, these claims recite additional features neither disclosed nor suggested by either Burgess or Gamma.

For example, claim 2 recites identifying, in the first command control vector, a communication link from which the first input message is received and identifying, in the first command control vector, a destination device for which the first input message is intended. The Office Action states that Burgess discloses these features and points to col. 4, lines 50-67 for support. The applicants respectfully disagree.

Burgess at col. 4, lines 60-67 discloses that each entry of the connection array contains an identifier of the output port of the source object, an identifier of the target object and an identifier of the input port of the target object. Identifying an input port of the target object and an output port of the source object is not equivalent to identifying, in a first command control vector, a communication link from which the first input message is received and a destination device for which the first input message is intended, as recited in claim 2.

Claim 3 recites similar features as claim 2 with respect to the second input message. Similar to the discussion with respect to claim 2, identifying an output port of the source object and an input port of the target object is not equivalent to identifying a

communication link from which a message is received or a destination device to which the message is intended, as recited in claim 3.

For at least these additional reasons, withdrawal of the rejection and allowance of claims 2 and 3 are respectfully requested.

Claim 14 recites features similar to those discussed above with respect to claim 1 and is believed to be allowable over the combination of Burgess and Gamma for reasons similar to those discussed above with regard to claim 1. Accordingly, withdrawal of the rejection and allowance of claim 14 are respectfully requested.

Claim 15 recites means for generating a first command control vector for a first input message, the first command control vector identifying a method object that contains one or more instructions for processing the first input message and means for generating a second command control vector associated with a second input message, the second command control vector identifying the same method object identified by the first command control vector, the method object containing one or more instructions for processing the second input message. The Office Action states that Burgess discloses these features and points to col. 8, line 46 to col. 11, line 12 for support. The applicants respectfully disagree.

Burgess at col. 8, line 46 to col. 11, line 12, as discussed above, refers to Code Table 3 that contains pseudocode for a sample scrollbar object. It is not clear how this portion of Burgess is relevant to the features recited in claim 15. For example, this portion of Burgess does not disclose means for generating a second command control vector associated with a second input message, where the second command control vector identifies the same method object identified by the first command control vector

and that the method object contains one or more instructions for processing the second input message. The applicants respectfully request that any subsequent Office Action particularly point out where this feature is disclosed in Burgess or withdraw the rejection.

The Office Action admits that Burgess does not disclose means for providing a single copy of the method object for the first and second command vectors, but states that Gamma discloses this feature. The Office Action further states that it would have been obvious to combine the teachings of Burgess and Gamma for the same reasons discussed above with respect to claim 1 (i.e., “one of ordinary skill in the art would have been motivated to use the mechanism of Gamma to achieve the hiding in Burgess”) (Office Action – page 4). The applicants respectfully disagree.

As discussed above with respect to claim 1, the allegation that Burgess “desires to hide different implementations/functional prototypes of the target object from the source object” is not supported by Burgess at col. 4, lines 31-37. In addition, even if Burgess did disclose some desire to hide different implementations/functional prototypes, as alleged, the Office Action has still not provided any objective motivation as to why it would have been obvious to combine Gamma with Burgess. The Office Action merely indicates that Gamma provides a mechanism for calling a target object with the same prototype and therefore, one of ordinary skill in the art would have been motivated to use the mechanism of Gamma to achieve the hiding in Burgess. This is merely a conclusory statement regarding an alleged benefit of the combination. The mere fact that one reference allegedly provides some missing disclosure with respect to a claim does not satisfy the requirements of 35 U.S.C. § 103 as to why it would have been obvious to combine these references.

For at least these reasons, withdrawal of the rejections and allowance of claim 15 are respectfully requested.

Claims 16 and 17 depend from claim 15 and are believed to be allowable for at least the reasons claim 15 is allowable. In addition, these claims recite additional features neither disclosed nor suggested by either Burgess or Gamma.

For example, claims 16 and 17 recite features similar to those discussed above with respect to claims 2 and 3. For reasons similar to those discussed above with regard to claims 2 and 3, the combination of Burgess and Gamma does not disclose or suggest the features of claims 16 and 17. For at least these additional reasons, withdrawal of the rejections and allowance of claims 16 and 17 are respectfully requested.

Claims 4 and 18 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Burgess in view of Gamma and further in view of admitted prior art. The rejection is respectfully traversed.

Claims 4 and 18 are dependent on claim 3 and 17, respectively, and are believed to be allowable for at least the reasons claims 3 and 17 are allowable. In addition, these claims recite additional features neither disclosed nor suggested by Burgess, Gamma or the admitted prior art.

For example, claim 4 recites that the processing the first and second input messages comprises using a single copy of a script to process the first and second input messages. Claim 18 recites a similar feature. The Office Action states that the admitted prior art discloses a method object invoking a script and points to page 2, line 29 of the applicants' specification for support (Office Action – page 7).

The applicants' specification does disclose that method objects may be, for example, a script. This disclosure, however, does not read on the feature recited in claim 4. The Office Action further states that the combined teachings of Burgess, Gamma and the admitted prior art would have provided a single copy of the script (Office Action – page 7). The applicants respectfully disagree.

None of the references, taken alone, or in combination discloses the use of first and second instructions that both invoke a single copy of the script to process first and second input messages. Therefore, even if the admitted prior art was combined with Burgess and Gamma, the claimed invention would not result.

For at least these additional reasons, withdrawal of the rejection and allowance of claims 4 and 18 are respectfully requested.

Claims 5 and 6 have been rejected under 35 U.S.C. § 103 (a) as being unpatentable over Burgess in view of Gamma and the admitted prior art and further in view of "Compiling Distributed C++," by H. Carr et al. (hereinafter Carr). The rejection is respectfully traversed.

Claims 5 and 6 are dependent on claims 1 and 4, respectively, and are believed to be allowable for at least the reasons claims 1 and 4 are allowable. In addition, claims 5 and 6 recite additional features neither disclosed nor suggested by Burgess, Gamma, the admitted prior art or Carr.

For example, the Office Action admits that Burgess does not disclose storing, in a first data object, data that is generated during execution of the script for the first command control vector; and storing, in a second data object, data that is generated during execution of the script for the second command control vector, as recited in claim

5. The Office Action, however, states that Carr discloses using a data object (value object) to store data generated during execution (return values) of a C++ program and points to pages 499-500 of Carr for support (Office Action – page 7). Even if Carr discloses such features, such a disclosure is not equivalent to storing, in a first data object, data that is generated during execution of the script for the first command control vector or storing, in a second data object, data that is generated during execution of the script for the second command control vector, as recited in claim 5.

Therefore, even if Carr was combined with the combination of Burgess, Gamma and the admitted prior art, the claimed invention would not result.

In addition, even if, for the sake of argument, the combination of Burgess, Gamma, the admitted prior art and Carr could reasonably be construed to disclose each of the features of claim 5, the motivation to combine Carr with the other disclosures does not satisfy the requirements of 35 U.S.C. § 103. For example, the Office Action states that it would have been obvious to combine the teachings of Burgess as modified by Gamma and Carr because the former implements the teaching in language C++ and the latter details one version of the language C++ (Office Action – pages 7-8). This statement is merely a conclusory statement and no portion of any of the references is pointed to as providing objective motivation for combining these disclosures. The mere fact that these references involve the C++ programming language does not provide the required motivation under § 103 as to why one of ordinary skill in the art would combine these references.

The applicants note that some of these arguments were made in the previous response. The present Office Action, however, has not addressed these arguments. The

applicants respectfully request that any subsequent Office Action address these arguments or withdraw the rejection.

In any event, for at least the reasons discussed above, withdrawal of the rejection and allowance of claim 5 are respectfully requested.

As to claim 6, the applicant notes that this claim was rejected based on the combination of Burgess, Gamma, the admitted prior art and Carr. Carr, however, was not relied upon in the grounds of rejection. Therefore, clarification as to the grounds of rejection is respectfully requested. The applicants also note that this request for clarification was made in the previous response and was not addressed in the present Office Action. The applicants, once again, respectfully request clarification as to the grounds of rejection.

In any event, the Office Action states that the admitted prior art discloses processing  $n$  logic units of instructions of a first type, interrupting such processing and processing  $m$  logical units of instructions for a second type and points to page 3, lines 3-8 of the applicants' specification for support. The applicants respectfully disagree.

The applicants' specification at page 3, lines 3-8 refers to multi-tasking systems which employ preemptive time-slice processing. Tasks in such systems are automatically interrupted after a predetermined period of time or after a specific instruction type. Processing may resume at a later point, preferably from where it was interrupted. This disclosure in the applicants' specification at page 3 is not equivalent to processing a number  $n$  of logical units of instructions for the first command control vector; interrupting processing of the first command control vector; and processing a number  $m$

of logical units of instructions for the second command control vector, as recited in claim 6.

Therefore, even if the admitted prior art was combined with Burgess, Gamma and Carr, the claimed invention would not result. For at least this additional reason, withdrawal of the rejection and allowance of claim 6 are respectfully requested.

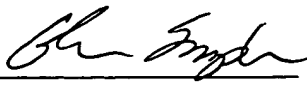
### **CONCLUSION**

In view of the foregoing amendments and remarks, the applicants respectfully request withdrawal of the outstanding rejections and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 13-2491 and please credit any excess fees to such deposit account.

Respectfully submitted,

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